

SPLASH 2004: NOAA Ship McArthur Weekly Science Report

12 August 2004

Jay Barlow, Cruise Leader

SCIENCE SUMMARY: Thursday, 05 August to Wednesday, 11 August 2004

Thursday and Friday were bad days for outboards. Our trusty Yamaha gave out on Friday and we had to break out the backup (freshly rebuilt and picked up during our Kodiak in-port). We pulled into sheltered waters in the Shumigan Islands, and the engineers and deck crew switched motors. The engineers worked late into the evening hooking up all the connectors. The next morning, we were back in the water, but the backup engine was immediately making noise. The engineer's pulled it out of the water and gave it a thorough look over, but could not see the cause. The advice from outboard mechanics in Seattle was to run it, so we did. Unfortunately, the problem did become more obvious. The lack of a bushing and a loose hub let the propeller push forward and rub against the rear seal in the lower unit. Slowly, through the day, it ate through the rear seal. Again the engineers worked late into the night. They switched the lower units from the ex-outboard and the nearly ex-outboard, and in the morning we had a fully functional Yamaha again. Hats off to the engineering staff! For more on the love-hate relationship between researchers and their outboards, I recommend reading Steinbeck's Logbook of the Sea of Cortez.

We lost very little actually time to outboard failure due to the diligence of the McArthur crew. This week we actually passed a milestone ... our target level of coverage for biopsies for the entire cruise was 250. Our cruise total at the end of this week is 266!!! Everyone deserves credit for this, including the gang back home that supports this effort, but Juan Carlos, our expert marksman, deserves an extra load of thanks. Like a small-town pharmacists, Juan Carlos is on call 14 hours a day, and he delivers. He goes out on the small boat every day and stays out as long as it does. We have a new target ... Juan Carlos wants to collect the complete set.

This week brought us far offshore to investigate the loneliest whales of the North Pacific. As far off as we go, we can still find some humpback whales. Usually they are swimming around with sperm whales, trying to hide their flukes from us. Our offshore-zig was cut a bit short by weather and by the need to pick up a new outboard in Dutch Harbor. As we approached the coastal waters south of Unalaska Island, our weather karma returned. We found surprisingly few humpback whales, and the ones we did find were off the shelf in deep waters. But we had a stellar (steller?) time with killer whales. One day we photo-IDs three groups (Michael Richlen tells us that two were residents and one transient) and we got biopsy samples from all groups.

Our stop in Dutch Harbor on Wednesday was a quick touch-and-go. We picked up the new outboard (thanks to acting-CO Greg Hubner and to PMC and everyone who pulled strings to make this happen in record time). We also refueled in gasoline and

espresso, the two liquids that now fuel us on our trip out to the end of the Aleutian Chain. We even got 4 more humpbacks in the evening as we left Dutch.

RE-SIGHTING NEWS:

This week Liz Zele found two more matches between 'our' whales and whales in existing photo-ID catalogs. Both of our whales were from the Southeast Alaska area and both matched to the Southeast Alaska Catalog.

SEAK 0022 matches SWFC-CSO-20040707-D-0123

SEAK GB98-01(19) matches SWFC-JPB-20040707-C-0033

Sightings and Effort Summary for Marine Mammals

Date	Start/Stop Time	Position	Total Distance	Avg. Beaufort
080504	0806	N54:41.84 W160:14.36	46.0 nmi	3.3
	1742	N55:06.87 W160:22.53		
080604	0619	N55:06.41 W160:57.74	9.1 nmi	3.2
	1904	N54:40.11 W161:27.82		
080704	0619	N54:40.47 W161:34.89	52.9 nmi	1.8
	2048	N53:39.26 W162:56.63		
080804	0644	N53:11.34 W163:37.31	76.1 nmi	4.1
	2113	N52:07.13 W165:01.96		
080904	0640	N51:36.24 W165:45.50	105.0 nmi	4.6
	2100	N51:55.85 W166:45.67		
081004	0640	N52:56.70 W166:40.20	79.9 nmi	1.7
	2106	N53:37.53 W165:31.17		
081104	0645	N53:55.93 W165:41.41	39.3 nmi	3.7
	1928	N54:03.76 W166:30.16		

CODE	SPECIES	TOT#
037	Orcinus orca	6
046	Physeter macrocephalus	4
070	Balaenoptera sp.	2
071	Balaenoptera acutorostrata	1
076	Megaptera novaeangliae	34
078	unid. small whale	1
079	unid. large whale	2
096	unid. cetacean	2

TOTAL 52

note: Dall's & harbor porpoises and pinnipeds are not included.

Biopsies (Juan Carlos Salinas)

Species	Weekly	Cumulative
Humpback whale	37	266
Fin whale	0	29
Blue whale	0	3
Sperm whale	0	4
Killer whale	5	22
Baird's beaked whale	0	3
Dall's porpoise	0	1
Cuvier's beaked whale*	0	1
*dead when sampled		

Photo-Project (Holly Fearnbach)

Species	Weekly #	Cumulative #
Humpback whale		
Catalog-quality flukes	78	476
Fin whale dorsal IDs	0	44
Sperm whale fluke IDs	0	9
Blue whale dorsal IDs	0	3
Killer whale dorsal IDs	20	80
Baird's beaked whales	0	15
Northern right whale dolphins*	0	1
Pacific white-sided dolphins*	0	3
Cuvier's beaked whale (dead)	0	1
Steller sea lion	0	1

*number of groups photographed

Acoustics Squeakly Report (Shannon Rankin)

Life on the acoustics front has been very consistent--- consistently dull and frustrating. Daily, we remind ourselves that if we can obtain a single successful recording in the presence of blue whales, then all our pain will have been worth it, tenfold. So, we have decided to increase our odds by deploying sonobuoys at 4am to locate these animals acoustically. Ideally, if we detect clear blue whale calls, we could approach the location before the visual team begins effort. Yes, we are indeed trying to find a needle in a haystack, and with a blindfold. Optimism? Or desperation? Our first trial was an evening sonobuoy, which surprised us with a series of low frequency pulse trains that had never been heard by any in our group. These were somewhat similar (yet different) than the thump train made by minke whales in the North Atlantic. While we were unable to locate this animal, we have an additional mystery to keep us entertained. Two needles, one enormous haystack.

Oceanographic Operations (Lillian Stuart)

Date	Number CTDs	
8/05	0	(outboard repair in Sand Point Harbor)
8/06	1	
8/06	1	
8/08	1	
8/09	1	
8/10	1	
8/11	1	

Poetry Corner (by Linda Hoffman, Palms Middle School, Los Angeles, CA)

“A Teacher’s Perspective”

I put on my mustang suit
In hopes to get a photo fluke
I am ready to be launched upon the sea
As the crew lowers our boat carefully

The ropes release us from the ship
I hold on with a good firm grip.
We are now out on our own
As we head out to a humpback zone.

Our little boat is a noisy creature
Not one of its best feature
But it can zig and zag quite fast
And the crew gets its photo fluke at last.

Now the sun begins to set
And out goal is finally met
We need to now head back in
Today’s work has come to an end.

As a teacher upon the sea
Watching scientists unfold it mystery
I thank the scientists and others too
For allowing me to be part of the SPLASH crew.